GOVERNMENT OF MYSORE, STORES PURCHASE COMMITTEE, BANGALORE.

No. S. P. C. 11817-26, *dated* 19*th January* 1931.

To

Firms dealing in Microscopes.

Gentlemen,

Supply of Microscopes and accessories required for use in the Laboratory of the Entomological Section of the Agricultural Department.

Please be good enough to intimate your best prices and the earliest time of delivery for the materials described below :—

Zeiss Cat. No.		Quantity.
E. S. A. 94.	Microscope for Dignostic purposes. Achromatic objectives 8n. ap. 0·20 40n. ap. 0·65 Homogeneous oil immersion 90 ap. 1·25 (1/12") with irisdiaphragm. Hygens Eyepieces 7 x 15x ..	One
Page 59.	Folding Magnifier 10 x	Five
„ 49 & 52	Dissecting Miscroscope and Stand X. A. with double tube hand rests and Dermatoscope Stand in cabinet. Stand base No. 125202 with objectives 3, 6 and 8 and Eyepieces, 5 & 10 ...	One
Page 55.	Illuminating Attachment with two spare lamp bulbs for use with double tube X No. 125107	..
„	Regulating Resistance with lead and plug for 220 volts. No. 139084.	One
	Vulcanite fork and intermediate carrier D to suit old model dissecting Microscope No. 54821	One
	Thermocouple with galvanometer, Thermos jar and accessories complete for the measurement of the temperature of insects ...	One

The prices to be quoted should be for delivery f. o. r. Bangalore and should reach the undersigned on or before the 10th February 1931.

No. S. P. C., dated 19*th January* 1931.

To

The firms dealing in Scientific and Laboratory Materials.

Gentlemen,

Laboratory Materials for the Bee Keeping Work.

Please be good enough to intimate your best prices and the earliest time of delivery for the materials described in the attached schedule.

The prices to be quoted should be for delivery f. o. r. Bangalore and should reach the undersigned on or before the 14th February 1931.

Schedule of Apparatus and Chemicals required for the Agricultural Department—Entomological Section for Bee-Keeping Works.

Item No.	Cat. No.	Description of article	Quantity
		Reference :—R. Steele and Brodie, Wormit Works, Wormit (Fife).	
1	22	Swiss Entrance	6
2	26	Record Cards	100
3	27	Patent Fasteners	1 doz.
4	27	Padlocks	1 „
5	40	Tin separators	1 „
6	66	Fine tinned wire for wiring frame	¼ lb. real 1.
7	103	The Sovereign Sprayer	1
8	102	Scent spray	1
9	102	Bellows for uniting with pea flour ...	2
10	129	New wire queen excluder, 15 x 15 to cover 10 frames ...	1
11	152	Bee-keepers' lotion	1
12	168	Bee escape with single escape	1
13	172	Hubam clover	½ lb.
14	197	Blow pump	1
15	214	Steele and Brodie's Queen cager	1
16	215	Queen pincers	1
17	213	Tools for transferring food and grub to queen cells ...	1
18	146	Honey bottles 1 lb. size	2 doz.
19	...	Do ½ „	2 „
20	147	Hygienic parchment pots	4 „

No. S. P. C. 12048-67, dated 21st—26th January 1931.

To

The Firms dealing in Electrical Meters.

Gentlemen,

Supply of Electrical Meters, etc., to the College of Engineering.

Please be good enough to intimate your best price and the earliest time of delivery for the materials described in the attached schedule.

The prices to be quoted should be for delivery f.o.r. Bangalore and should reach the undersigned on or before the 20th February 1931.

As the materials are required for use in an educational institution, we trust you will quote the special rates usually allowed to such institutions.

Schedule.

Serial No.	Description of article	Accurate specifications	Quantity required
		Leeds & Northrup Co., Philadelphia Pa.	
1	Students Kelvin Bridge ..	No. 4340, Range ·001 to 1 ohm, carrying Cap. 15 amp. (Catalogue No. 40 of 1927, page 23.)	One
2	Adjustable Air Condenser ..	No. 1155, Range 20 to 1000 Micro Micro-fards. (As described in Ct. No. 10 of 1927, page 9.)	Two
3	100 Millihenry Standard Self Inductance.	Current capacity ·15 amp. Ct. No. 1537. (As described in Cat. No. 10 of 1927, page 13.)	One
4	Epestein Coreless Apparatus ..	No. 537 , with 3 specimen Insitation sets (as described in Cat. No. 10 of 1927, page 27.)	One
		Baird and Tatlack Co.	
5	Gressot Flux Meter	D. 3680	One
6	Search Coil Type B	D. 3681 (10,00 Gauss.) Above described in 1924 Ct. Vol. IV, page 478.	One
		International General Electric Co., Schenectady, N. Y.	
7	Micro Ammeter	Type D. P. 2 capacity 150 Micro amp. Ct. No. 290563. (Bulletin G. E. A. 158, Sep. 1925, page 13.)	One
8	Single-Phase Watt Meter for low power factor measurements.	5 Amp. 300 Watts, 220-259 Volts. Ct. No. 950407. (Same Bulletin, page 20.)	Two
9	Single-Phase Watt Meter ..	5/10 Amp. 150/300 Volts. 150-300 Watts, Ct. No. 290522. (Same Bulletin, page 30).	One
10	Over load and reverse current D. C. 550 Volts Air Circuit Breaker.	Type C. P. single pole, 225 Amp. 125 Volts, for 1½" panel Ct. No. 21959-394.	One
11	Generator Stator	Type A. H. 1.4.15. M. 1800, No. 432367 Form J. 220 Volts. 39 Amp. 1800 R. P. M. 60 cycles. With base plate and with usual 12 terminals brought to a terminal board. The Stator must be provided with 3 sets of brush holders so that it may be used as 3 phase slip ring Induction Motor with wound rotor supplied by the company previously.	One
		Metropolitan Vickers Co., Stratham, Manchester.	
12	Single-Phase 5 Amp A. C. Overload Relay. (Solenoid). Fixed time limit.	Type A. 25 cycles, circuits. (To close contracts) Ct. No. 869. (Described in leaflet No. X 341/2-2.)	One
	Extra element for the above ..	10 to 60 seconds	One
13	Inverse time limit, adjustable definite minimum time element overload relay.	Type P. B. Single pole, 5 Amp. with 50 to 200 per cent tap, for 25 cycles circuit. Independent tripping self resetting with flag indicator. Ct. No 310. (Leaflet 341/10-2).	One
14	A. C. Directional Relay with adjustable definite maximum inverse time limit self resetting.	Type N. P. 5 Amp 300 Volts, (25 cycles). Single-Phase units Ct. No. 302 (described in leaflet No. 341/10-2b.)	Two
15	5 Amp. Induction type round pattern Ammeter.	Type F. Ct. No. 1507. (Leaflet X 345/3-2.)	One
16	Portable Power Factor Meter ..	Type P. F. 5 Amp. 60 cycles, 220 Volts. Single-Phase (Induction P. F. 3-1-3). Ct. No. 20342. Leaflet 345/6-2.	One
17	Portable Induction Frequency Meter.	Type P. F. 260 Volts. 20 to 30 cycles. (Leaflet 345/6-2) ..	One
18	Do do ..	Type P. F. 260 Volts. 50 to 70 cycles, Ct. No. 20360. (Leaflet 345/6-2.)	One
19	Rotory Synchroscope ..	Type F. 220 Volts. 3" dial. (All frequency.) Ct. No. 626. (Leaflet 345/20-2.)	One
20	Single-Phase Rotating Portable Sub-Standard Watt hour meter.	Type R. N. 240 Volts, 25 and 60 cycles, 10 Amp. arranging for 2 frequencies. Prefix J to Ct. No. 7641. (Leaflet 358/4-2.)	One
21	Unbalanced 3 phase Portable Rotating Sub-Standard Watt hour meter.	Type R. N. 10 Amp. 25 and 60 cycles (2 range), 240 Volts. Ct. No. 7656. Prefix J for double ranging frequency. (Leaflet 358/4-2.)	One

No. S. P. C. 1221-60, *dated* 23*rd January* 1931.

To

The firms dealing in Pumping Sets.

Gentlemen,

Pumping sets required for Irrigation, Water Supply, etc.

Please be good enough to intimate your best prices and the earliest time of delivery for the following pumping sets:—

Item (1)—*Six* Centrifugal Pumps, to pump 2,000 gallons of water per minute (120,000 gallons per hour) against a total head of 20 feet.

Item (2)—*One* Directly coupled Electric Pumping Set (12 H. P.), capable of delivering 4,000 gallons per hour against a head of 220 feet.

Item (3)—*One* Centrifugal pump (5 H. P.), capable of delivering 3,000 gallons per hour against a head of 120 feet

NOTE.—The pumping sets must conform to the standard of B.E.S.A. specifications or the A.I.E.E. or A.S.T.M. standards and in particular should satisfy the requirements of the general specifications attached.

The prices to be quoted should be for delivery f.o.r. Bangalore in case of items 1 and 2, and f.o.r. Tumkur in case of item 3, and should reach the undersigned on or before the 28th February 1931.

General specifications of the Pumping Sets required.

The pumps required on this enquiry should be of Centrifugal type, direct coupled to an induction motor suitable for 220 volts, 3 phase, 25 cycles. The pumps should be simple and rugged in design. The number of stages should be as few as possible. Suitable drawings should be furnished by the firms showing details of the particular design offered.

The efficiency of the pump shall be not less than 75 per cent and the overall efficiency of the pump and the motor should be not less than 55 per cent when the pump is delivering the rated quantity of water against a total head of 20 feet.

The pump and the motor should be mounted on a common bed plate of suitable design, so that it will ensure perfect alignment for the machines. The shaft should be of the best quality nickel chrome or high tensile steel accurately machined and polished, suitable feathers being provided for the impeller, and should be secured in a central position by means of lock-nuts. The impeller should be of genuine phospher bronze, if possible. The pump bearings should be of the "ring oiled" type fitted on either side of the pump and entirely separate from the stuffing box The bearings must not only ensure perfect lubrication but also prevent undue wear due to the entrance of grit or any foreign matter into the bearings.

The pump shall be provided with all the necessary fittings such as foot-valves, delivery valves, strainers, pressure gauge, air and drain cocks, etc., and a funnel in front.

The electric motors should be of the squirrel cage induction type suitable for 3 phase, 25 cycles, 220 volts supply. The motor shall be designed for continuous operation with the temperature rise of not more than 40°C. above an ambient temperature of 35°C. and withstand an over-load of 25 per cent without injurious effects. The windings of the motors shall be specially impregnated to with stand the climatic conditions of this part of India.

Suitable starting switches of a simple design should be supplied with the motor, details of which should be furnished.

Yours faithfully,

M. S. RAMCHENDRA RAO,
Secretary, Stores Purchase Committee.